

Date: Tuesday, 10/2/2007 10:39:26 AM
User: Kim Johnston

Process Sheet

44

| | | | |
|-----------------------|--|------------------|------------------------------------|
| Customer | : CU-DAR001 Dart Helicopters Services | Drawing Name | : 212/205 HIGH FED X-TUBE ASSEMBLY |
| Job Number | : 34931 | | |
| Estimate Number | : 10254 | | |
| P.O. Number | : N/A | Part Number | : D212664101 |
| This Issue | : 10/2/2007 S.O. No. : N/A | Drawing Number | : D212-664-141 REV C |
| Prsht Rev. | : NC | Project Number | : N/A |
| First Issue | : N/A Type : LANDING GEAR | Drawing Revision | : C |
| Previous Run | : 34930 | Material | : N/A |
| Written By | : <u>JA 07 10 02</u> | Due Date | : 10/30/2007 Qty: 1 Um: Each |
| Checked & Approved By | : <u>JA 07 10 02</u> | | |
| Comment | Est Rev:E 04.02.16 Reformat KJ/DS Est Rev:F 06-03-29 Remove Coments on Pick List JLM Est Rev:G 07-04-30 As per Rev C JLM | | |

Additional Product

Job Number:



| | | |
|---------|-----------------------|---------------|
| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|

| | | |
|-----|----|------------------|
| 1.0 | DC | DOCUMENT CONTROL |
|-----|----|------------------|



KS 07/10/02 (1)

Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D212-664-101CHG003

JA 07/10/02

| | | |
|-----|----------|--------------------|
| 2.0 | D6005128 | Crosstube material |
|-----|----------|--------------------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| | | | |
|-----|-------------|-------------|-------|
| Qty | Part number | Description | Batch |
|-----|-------------|-------------|-------|

| | | | |
|---|-----------|-----------|---------|
| 1 | D6005-128 | Crosstube | B 25665 |
|---|-----------|-----------|---------|

Check OD = 2.750"; ID = 2.000"

J.F. 07/10/06

| | | |
|-----|------------|----------------------------|
| 3.0 | MORI SEIKI | MORI SEIKI CNC LATHE LARGE |
|-----|------------|----------------------------|



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113

2-Turn first side as per Folio FA113

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-141.

J.F. 07/10/07

| | | |
|-----|-----|------------------------------|
| 4.0 | QC1 | INSPECT ALL DIM TO DIM SHEET |
|-----|-----|------------------------------|



Comment: INSPECT ALL DIM TO DIM SHEET

J.F. 07/10/07

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH FED X-TUBE ASSEMBLY

Job Number: 34931

Part Number: D212664101

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA113

J.F. 07/10/07

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-141.

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

J.F. 07/10/07

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.F. 07/10/08 (1)

8.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Remove sand and plugs

J.F. 07/10/07

2-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-141

9.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Polish entire outside surface of crosstube

Jb 7-10-10

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Jb 7-10-10

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

Jb 7-10-10

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

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Date: Tuesday, 10/2/2007 10:39:27 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH FED X-TUBE ASSEMBLY

Job Number: 34931

Part Number: D212664101

Job Number:



Seq. #:

Machine Or Operation:

Description:

12.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D212-664-141 using CNC bender program 212-fw and Folio FT015

EL 7-10-16

13.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

JA-10-16 @

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube as per Dwg D212-664-141 using drill Jig DT8548 & DT8549

2-Ream hole to finish size in tube as per Dwg D212-664-141 using drill Jig DT8548 & DT8549. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-141

EL/SR
7-10-17

JD 7-10-8

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of bending and drilling

JD 7-10-18

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

EL 07/10/18

17.0

OUTSIDE SERV.10

OUTSIDE SERVICES -LG



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038

Issue P/O: 4852

LPI as per ASTM 1417 Level 2

Attach copy of NDT results to work order

CL 7/10/19 @

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage Ensure copy of NDT results attached to work order.

EL 7/10/19

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH FED X-TUBE ASSEMBLY

Job Number: 34931

Part Number: D212664101

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D212-664-141

RT 07-10-19

20.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

RT 07-10-20

21.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Then, Wrap in plastic bag to protect from scratches

ml 07-10-22 (1)

22.0

D28931

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2893-1

Support

32779

RT 07-10-22

23.0

D3595

Rubber Cushion (per sq ft)



Comment: Qty.: 0.0840 sf(s)/Unit Total : 0.0840 sf(s)

Rubber Cushion (per sq ft)

.630" X 4.5" 4PCS

Batch:

33833

RT 07-10-22

24.0

MS2192025

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-25

Clamp

104802

RT 07-10-22

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Date: Tuesday, 10/2/2007 10:39:27 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH FED X-TUBE ASSEMBLY

Job Number: 34931

Part Number: D212664101

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install supports with magnobond as per QSI 015 Adhere for for 12 Hrs

A/R 6398 Magnobond

Batch: 104677

Expiry Date: 08-10-01

75 07. 10-22

2-Install clamps as per Dwg D212-664-141. Torque clamps to 80-100 in lb.

ml 07 10 24

26.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 7/10/24

27.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

28.0

D34281

Placard



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

PLACARD

Batch: 1326249

59

29.0

AN635A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: M107679

59

30.0

AN636A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: M105825

59

31.0

AN960JD616

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Washer

Batch: M105125

7/10/25 59

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: D Date: 07/10/26
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH FED X-TUBE ASSEMBLY

Job Number: 34931

Part Number: D212664101

Job Number:



Seq. #:

Machine Or Operation:

Description :

32.0

MS21042L6

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Nut

Batch:

1104021

7/10/25

50

1x

33.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

34.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Identify and pack for shipping as per PPP D212-664-101

c 6/10/26

50

1x

35.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

1
7/10/26

Job Completion



u 0740-26

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

| | |
|---|----------------------------------|
| DART AEROSPACE LTD | Work Order: 34931 |
| Description: Crosstube Assembly (205/212/412 High Fwd) | Part Number: D212-664-141 |
| Inspection Dwg: D212-664-141 Rev: C | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

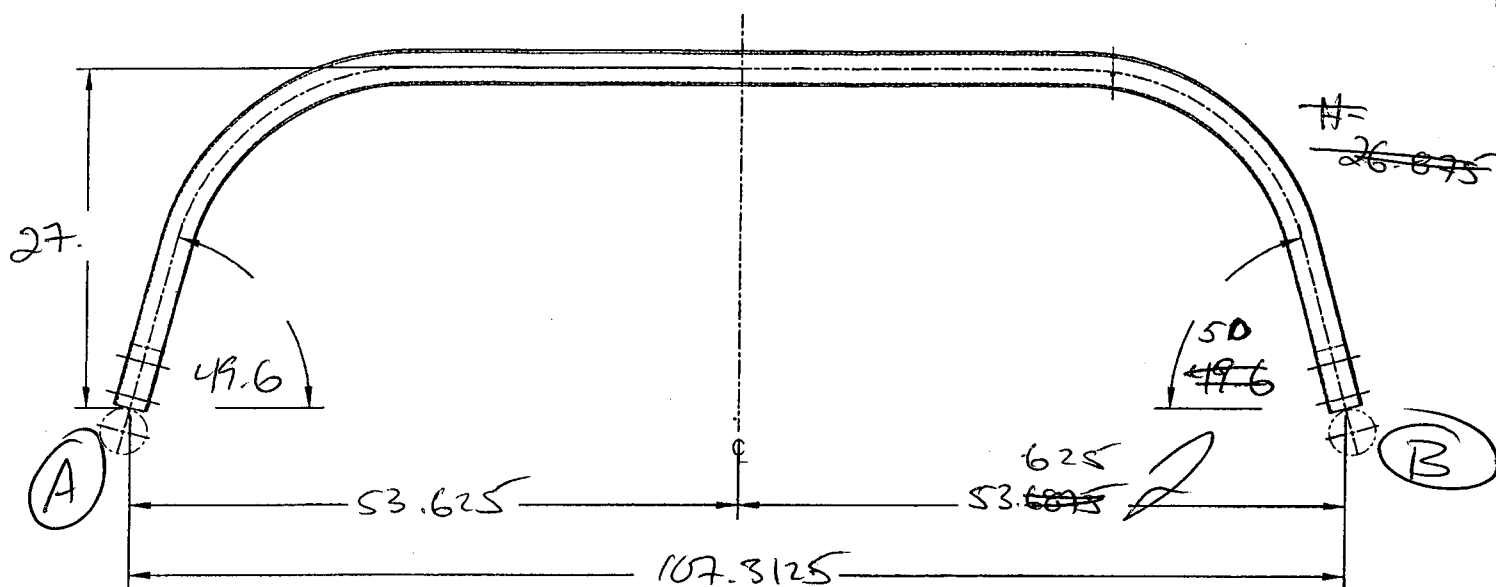
| Inspection Sheet Drawing Dimension | | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---------------------------------------|--------|---------------|---------------------|--------|--------|-------------------------|----------|
| SIDE A | 0.200 | +/-0.010 | 0.197" | ✓ | | | |
| | R0.063 | +/-0.010 | R0.063" | ✓ | | | |
| | 2.740 | +0.005/-0.000 | 2.744" | ✓ | | | |
| | 5.097 | +/-0.030 | 5.110" | ✓ | | | |
| | 2.304 | +0.005/-0.000 | 2.308" | ✓ | | | |
| | 2.340 | +0.005/-0.000 | 2.344" | ✓ | | | |
| | 2.398 | +0.005/-0.000 | 2.402" | ✓ | | | |
| | 2.448 | +0.005/-0.000 | 2.452" | ✓ | | | |
| | 2.498 | +0.005/-0.000 | 2.501" | ✓ | | | |
| | 2.549 | +0.005/-0.000 | 2.554" | ✓ | | | |
| | 2.599 | +0.005/-0.000 | 2.603" | ✓ | | | |
| | 2.671 | +0.005/-0.000 | 2.675" | ✓ | | | |
| | 2.701 | +0.005/-0.000 | 2.704" | ✓ | | | |
| | | | | | | | |
| SIDE B | 0.200 | +/-0.010 | 0.197" | ✓ | | | |
| | R0.063 | +/-0.010 | R0.063" | ✓ | | | |
| | 2.740 | +0.005/-0.000 | 2.744" | ✓ | | | |
| | 5.097 | +/-0.030 | 5.110" | ✓ | | | |
| | 2.304 | +0.005/-0.000 | 2.308" | ✓ | | | |
| | 2.340 | +0.005/-0.000 | 2.344" | ✓ | | | |
| | 2.398 | +0.005/-0.000 | 2.402" | ✓ | | | |
| | 2.448 | +0.005/-0.000 | 2.452" | ✓ | | | |
| | 2.498 | +0.005/-0.000 | 2.503" | ✓ | | | |
| | 2.549 | +0.005/-0.000 | 2.554" | ✓ | | | |
| | 2.599 | +0.005/-0.000 | 2.604" | ✓ | | | |
| | 2.671 | +0.005/-0.000 | 2.676" | ✓ | | | |
| | 2.701 | +0.005/-0.000 | 2.705" | ✓ | | | |
| | 126.51 | +/-0.020 | 126.515 | ✓ | | | |

| | | | |
|--------------------------|--------------------------------|----------------------------|-----|
| Measured by: J.F. | Audited by: [Signature] | Prototype Approval: | N/A |
| Date: 07/10/07 | Date: 07/10/08 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|--|------------|-------------|
| A | 05.04.27 | New Issue (P/O D412-664-101) | KJ/JLM | |
| B | 06.03.15 | Tolerance revised for 5.097 per Dwg Rev update | KJ/JLM | |
| C | 07.05.28 | Dwg Rev updated | KJ/JLM | [Signature] |

| | | | |
|---|--|--------------|--------------|
| DART AEROSPACE LTD | | Work Order: | 34931 |
| Description: Crosstube High Fwd (205/212/412) | | Part Number: | D212-664-101 |
| Inspection Dwg: D212-664-141 Rev: C | | Page 1 of 1 | |

| Required Dimension | Min | Max |
|--------------------|--------|-------|
| Height | 26.79 | 27.05 |
| 1/2 Span | 53.59 | 53.85 |
| Angle | 49 | 52 |
| Total Span | 107.18 | 107.7 |



| Comments |
|--|
| height is uneven by .125, but well within tolerance Re-bend side B |
| |
| |

| | |
|-----------------|----------|
| QC15 Inspection | |
| Date | 07-10-15 |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|----------------------------------|------------|----------|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 07.05.31 | Dimensions updated per Dwg Rev C | KJ/JM | |

DART

| | | | |
|----------------------|--------------------------------|---|------------------------|
| DESIGN PH | DRAWN BY PH | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED QD | APPROVED [Signature] | DRAWING NO. D212-664-141 | REV. C SHEET 1 OF 3 |
| DATE 07.03.08 | | TITLE XTUBE ASS'Y (205/212/412 HI FWD) NTS | |
| A | 00.12.12 | NEW ISSUE | |
| B | 05.02.04 | ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES | |
| C | 07.03.08 | REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS | |

RELEASED07.04.24 **[Signature]**

| Qty | Part Number | Description |
|-----|----------------|---|
| X | D212-664-141 | CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD) |
| 1 | D6005-128 | CROSSTUBE |
| 2 | D2893-1 | SUPPORT |
| 4 | D3595-063-450 | RUBBER CUSHION |
| 4 | MS21920-25 | CLAMP (OR MS21920-26) |
| A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.51 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 10) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT
- 11) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY

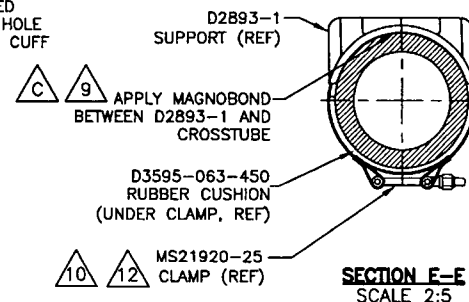
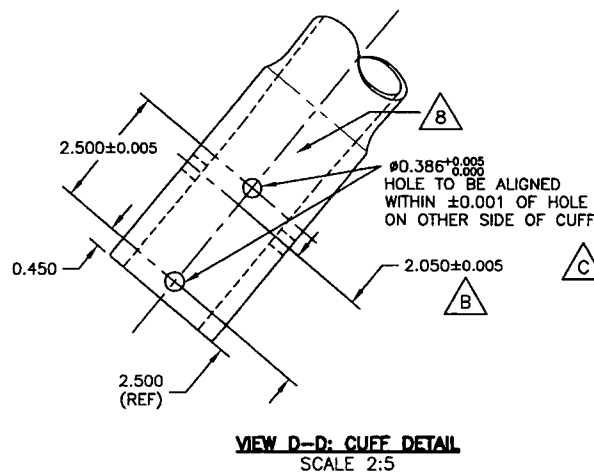
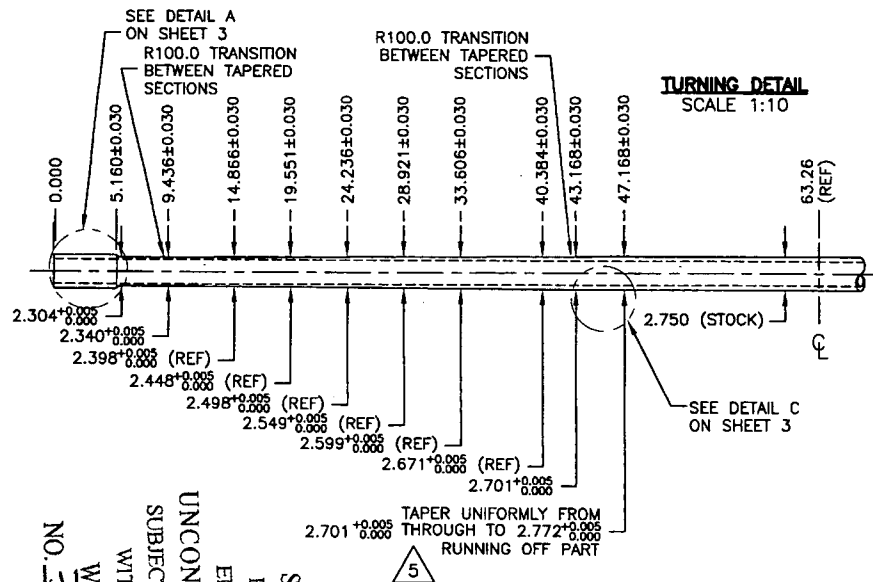
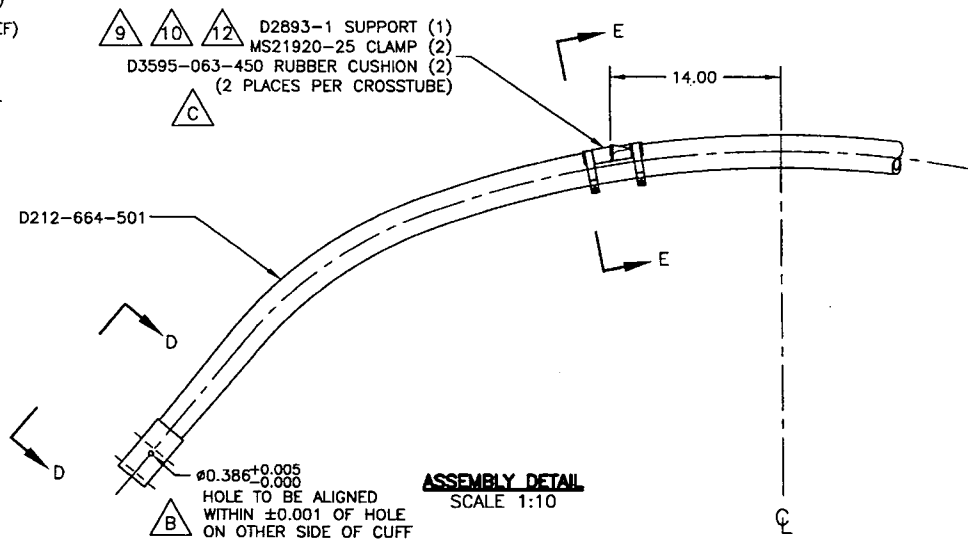
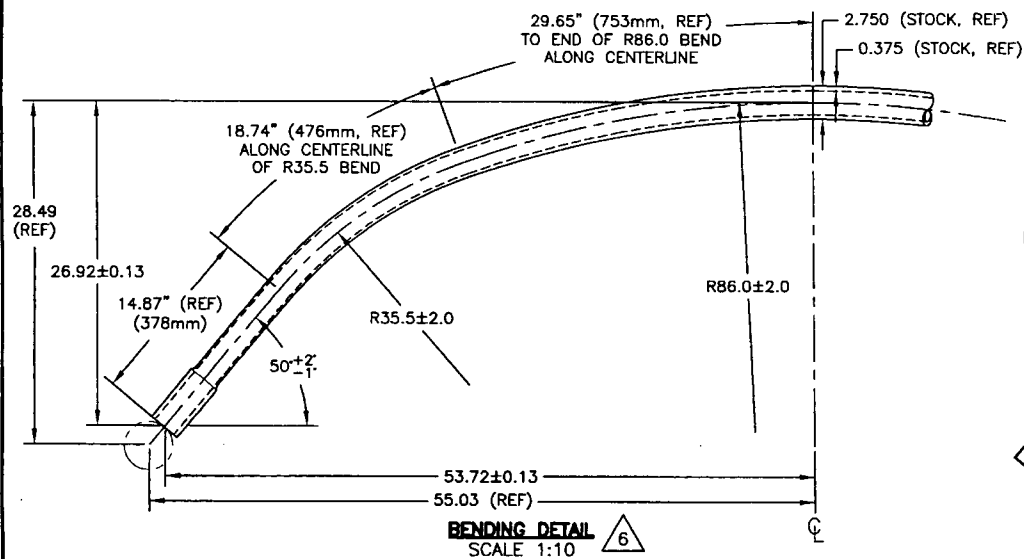
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 34931

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|---------|----------|----------|----------------------------------|--------------|---|
| DESIGN | PH | DRAWN BY | PH | DART | DART AEROSPACE LTD. WIMBORNE, OXFORD, CANADA |
| CHECKED | 90 | APPROVED | 4 | DRAWING NO. | REV. C |
| DATE | 07.03.08 | TITLE | XTUBE ASS'Y (205/212/412 HI FWD) | D212-664-141 | SHEET 2 OF 3 |
| | | SCALE | 1:10 | | |

NO. 34931

WORK ORDER

SUBJECT TO AMENDMENT

WITHOUT NOTICE

ENGINEERING

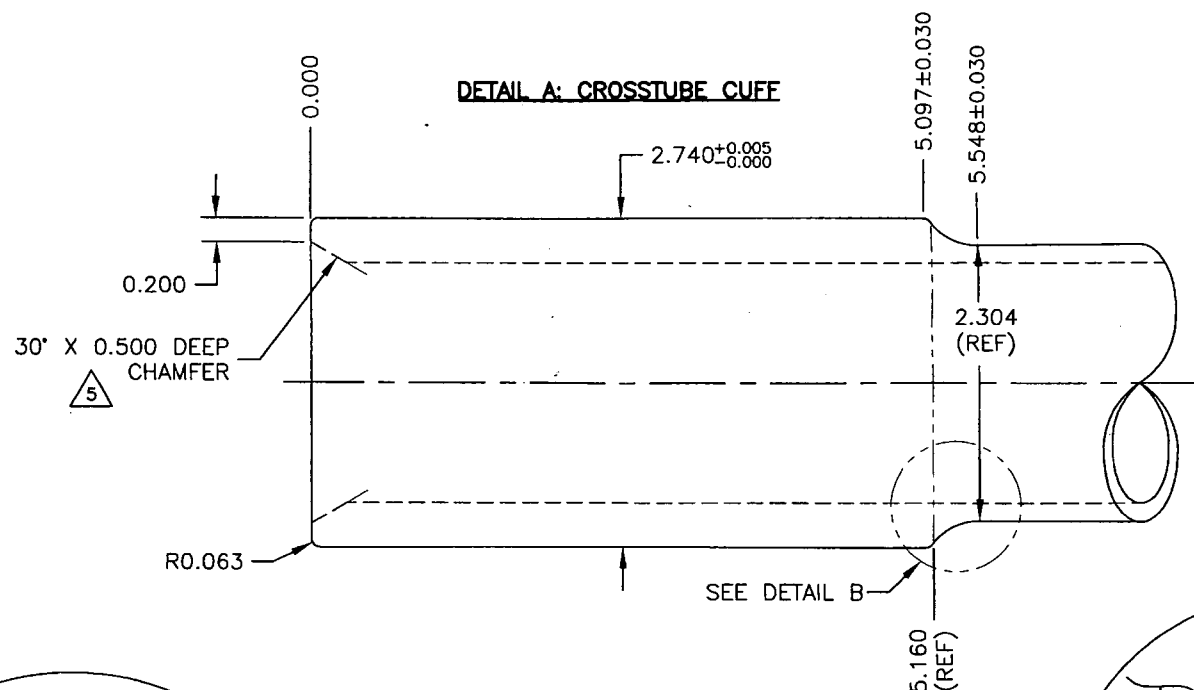
RETURN TO

SHOP COPY

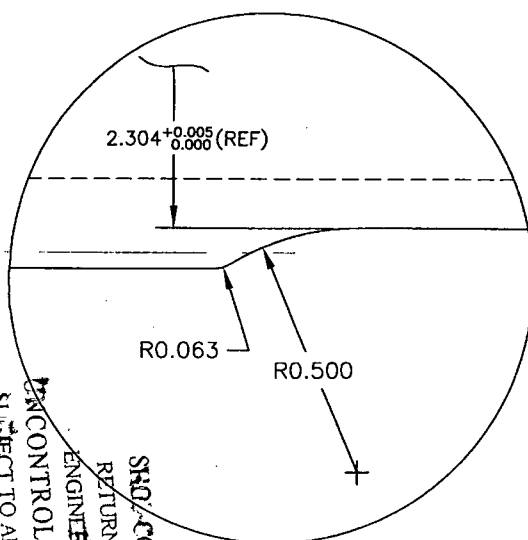
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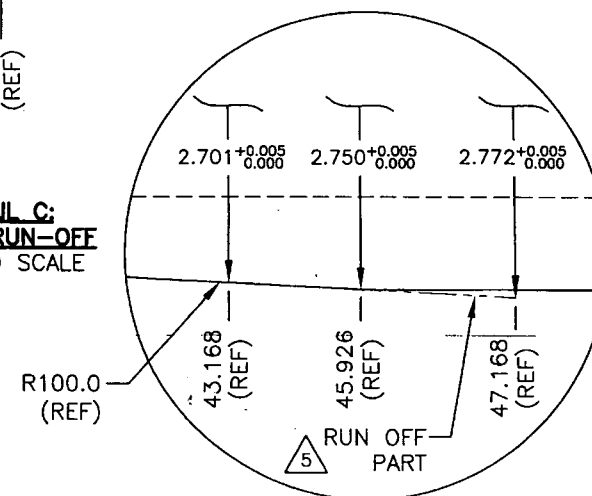
DETAIL A: CROSSTUBE CUFF



**DETAIL B: CUFF
TRANSITION**
 SCALE 4:1



**DETAIL C:
TAPER RUN-OFF**
 NOT TO SCALE



NO. 34931
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|------------------|---|-----------------------------|--|
| DESIGN PH | DRAWN BY PH | DART | DART AEROSPACE LTD. MILKESBURY, ONTARIO, CANADA |
| CHECKED J | APPROVED H | DRAWING NO. D212-664-141 | REV. C SHEET 3 OF 3 |
| DATE 07.03.08 | TITLE XTUBE ASS'Y (205/212/412 HI FWD) | SCALE 1:1 | |



LIQUID PENETRANT TEST REPORT

P- 08665

PAGE 1 OF 1

CLIENT

Dart Aerospace

DATE

October 19, 2007

ATTENTION

Bill Beckett

ACUREN JOB NO.

177-07-01157

ADDRESS

1270 Aberdeen Street

PO/NO.

Hawkesbury Ontario K6A 1K7

WORK LOCATION

as shown

ACCEPTANCE STD.

E1417-99

REV./DATE

99

PROJECT

Cross Tube Inspection

ITEM(S) EXAMINED

Inspection of X-tube assemblies, 212/205 high Fed, 212/205 High AFT, 206L FWD, 412 High AFT, 212/205 high Fed, as listed Below

JOB DESCRIPTION

PROCEDURE NO. LT-0002 REV./DATE/E1417-99

TECHNIQUE NO. LT-0002 REV./DATE

PART NO.

X-Tube assemblies as listed

MATERIAL

7075 Aluminum

THICKNESS

< 1/2"

SCOPE

100% examination of all outer surfaces per standard ASTM E1417-99
Type I, Method A, Level 2.

TEST DETAILS

| | | | | | |
|---------------------|---|----------------------------------|--|--|---|
| METHOD | <input checked="" type="checkbox"/> FLUORESCENT | <input type="checkbox"/> VISIBLE | <input checked="" type="checkbox"/> WATER WASH | <input type="checkbox"/> SOLVENT REMOVABLE | <input type="checkbox"/> POST EMULSIFIED |
| FAMILY BRAND | Magnaflux | Batch # 07F046 | BLACK LIGHT S/N | 8168 | <input checked="" type="checkbox"/> OUTPUT > 1000 μ W/cm ² |
| FLUORESCENT | Zygo ZL67 | MINIMUM DWELL TIME | 10 | MIN. | <input type="checkbox"/> AMBIENT < 2 fc |
| FLUORESCENT REMOVER | Water | MINIMUM DRY TIME | >10 | MIN. | <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE |
| DEVELOPER | NA | MINIMUM DWELL TIME | 10 | MIN. | OTHER |
| DEVELOPER TYPE | <input type="checkbox"/> NON AQUEOUS | <input type="checkbox"/> AQUEOUS | <input type="checkbox"/> DRY | LIGHT METER S/N | 1098866 |
| | | | | | CAL DUE DATE 8/9/13 |

TEST SURFACE

| | | | | | |
|---------------------|---------------------------------------|--|---|---------------------------------------|--|
| SURFACE CONDITION | <input type="checkbox"/> AS GROUND | <input type="checkbox"/> AS WELDED | <input type="checkbox"/> MACHINED | <input type="checkbox"/> SHOT BLASTED | <input checked="" type="checkbox"/> CLEAN BARE METAL |
| SURFACE TEMPERATURE | <input type="checkbox"/> < -4°C/ 20°F | <input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F | <input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F | <input type="checkbox"/> > 52°C/125°F | |

RESULTS-

☐ METRIC ☒ IMPERIAL

| ITEM | COMMENTS | ACCEPT | REJECT |
|---------------------------------|-------------------------|--------|--------|
| P.N. D212664100 x 1 piece | Job # 34929 | | |
| P.N. D212664201 x 1 piece | Job # 30420 | | |
| P.N. D206667103 x 2 pieces | Job #'s 34926 and 34139 | | |
| P.N. D412664203 x 1 piece | Job #33537 | | |
| P.N. D212664101 x 2 pieces | Job #'s 34931 and 34930 | | |
| All Seven (7) Units Acceptable. | | | |

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE

SIGNATURE

DTR # 177-07-01157

TECHNICIAN (SIGNATURE):

NAME (PRINT):

Mark Westover

REPORT

REVIEWED BY:

NAME

INITIALS

CGSB LEVEL

2

SNT LEVEL

2

CGSB REG. NO.

5323

CGSB LEVEL

SNT LEVEL

CGSB REG. NO.